

What is claimed is: ~~Claims~~

Claims 1-14 are hereby canceled.

1 15(currently amended). A method for delivering a pharmaceutical
2 agent to a ~~portion of a body of a~~ host comprising the steps of:
3 **providing** ~~applying~~ at least one **elongated** electrode ~~to the portion of~~
4 ~~the body, said electrode having~~ **with a conductive material enclosed within**
5 a partially conductive outer surface;
6 **inserting the electrode so as to pierce a host tissue;**
7 infusing the **host tissue** ~~portion of the body~~ with the pharmaceutical
8 agent;
9 electrically stimulating the **host tissue** ~~portion of the body~~ using a
10 signal generator coupled **between** ~~to~~ the electrode **and a remote point**, the
11 signal generator being operable to deliver an at least partially periodic signal to
12 the electrode; **and,**
13 **wherein the partially conductive outer surface of the electrode**
14 **limits electrical current coupled into the host tissue from the signal**
15 **generator.**

1 16(currently amended). The method of claim 15 further comprising
2 the steps of **inserting at least one second electrode into the host tissue,**
3 **also** ~~applying at least two electrodes to the portion of the body, each electrode~~
4 having a partially conductive outer surface, and wherein ~~a~~ the portion of the
5 body **substantially between the electrodes** is electrically stimulated **by**
6 **coupling the** ~~using a~~ signal generator ~~coupled~~ to each **said** electrode, the
7 signal generator being operable to deliver an at least partially periodic signal to
8 the electrodes.

1 17(currently amended). The method of claim 16 wherein the signal
2 generator is operated in a **controlled** ~~constant~~ voltage mode.

1 18(original claim). The method of claim 15 wherein the signal generator
2 is operable to deliver about ± 100 to ± 400 volts.

1 19(currently amended). The method of claim 15 ~~wherein~~ **comprising**
2 **operating** the signal generator ~~is operable~~ **such that the partially**
3 **conductive outer surface of the electrode couples electrical current into**
4 **the host tissue from the signal generator sufficient** to deliver a charge in
5 the range of 5-20 millicoulombs ~~to the portion of the body~~ per periodic cycle.

Claims 20-24 are hereby canceled.

1 25(currently amended). A method of electrically stimulating the
2 cellular delivery of a pharmaceutical agent in vivo within a **tissue of a**
3 mammalian **host tissue**, which comprises:

4 applying an electrode configuration to a portion of the mammalian **host**,
5 ~~wherein said electrode configuration having~~ **including penetrating the host**
6 **tissue with at least one elongated conductive electrode within** a partially
7 conductive outer surface ~~or 2 sets of complementary electrodes;~~

8 infusing the portion of the mammal with a pharmaceutical agent,
9 **adjacent to the electrode**; and,

10 establishing an electric field of a predetermined potential between the
11 electrode ~~configuration~~ **and a point spaced from the electrode by the**
12 **portion thus infused;**

13 **wherein electric** ~~such that the~~ current **coupled into the portion** from
14 the electric field is limited **by said partially conductive outer surface** to an
15 amplitude that is less than ~~a~~ **the** current that would be predicted to flow under
16 Ohm's law **from the conductive electrode within the partially conductive**
17 **outer surface;** ~~wherein establishing the electric field and current flow occurs~~
18 ~~without significant involuntary muscle reflexes during the course of treatment.~~

1 26(currently amended). The method of claim 25 wherein the
2 pharmaceutical agent **comprises** ~~is~~ a nucleic acid molecule.

1 27(currently amended). The method of claim 25 wherein the nucleic
2 acid molecule **comprises** ~~is~~ a DNA plasmid expression vector.

1 28(currently amended). The method of claim 25 wherein the
2 mammalian **host** is a human.

1 29(currently amended). The method of claim 25 wherein the
2 pharmaceutical agent **comprises** ~~is~~ a nucleic acid molecule.

1 30(currently amended). The method of claim 29 wherein the nucleic
2 acid molecule **comprises** ~~is~~ a DNA plasmid expression vector.

1 31(currently amended). The method of claim 25 wherein the
2 pharmaceutical agent **comprises** ~~is~~ a protein.

1 32(currently amended). The method of claim 25 wherein the
2 pharmaceutical agent **comprises** ~~is~~ an organic molecule.

1 33(currently amended). A method of electrically stimulating the cellular
2 delivery of a pharmaceutical agent in vivo within a mammalian **host** tissue,
3 which comprises:

4 applying an electrode configuration to a portion of ~~a the~~ mammal,
5 ~~wherein said electrode configuration having~~ **including penetrating the host**
6 **tissue with at least one elongated conductive electrode within** a partially
7 conductive outer surface ~~or 2 sets of complementary electrodes;~~

8 infusing the portion of the mammal with a pharmaceutical agent,
9 **adjacent to the electrode;**

10 establishing an electric field of a predetermined potential between the
11 electrode configuration and a point spaced from the electrode by the
12 portion thus infused;

13 wherein electric ~~such that the~~ current coupled into the portion from
14 the electric field is limited by said partially conductive outer surface to an
15 amplitude that is less than a ~~the~~ current that would be predicted to flow under
16 Ohm's law from the conductive electrode within the partially conductive
17 outer surface; and,

18 measuring and recording a voltage and current delivered to the portion
19 of the mammal while electrically stimulating the ~~to~~ portion of the mammal;
20 and, thereby generating electrical parameter data, wherein

21 establishing a potential at which the current coupled into the
22 portion by said electric field provides ~~comprises applying~~ electric stimulus
23 without measurable involuntary muscle reflexes during a ~~the~~ course of
24 treatment.

1 34(currently amended). The method of claim 33 wherein the
2 pharmaceutical agent comprises ~~is~~ a nucleic acid molecule.

1 35(currently amended). The method of claim 34 wherein the nucleic
2 acid molecule comprises ~~is~~ a DNA plasmid expression vector.

1 36(original claim). The method of claim 33 wherein the mammal is a
2 human.

1 37(currently amended). The method of claim 36 wherein the
2 pharmaceutical agent comprises ~~is~~ a nucleic acid molecule.

1 38(currently amended). The method of claim 37 wherein the nucleic
2 acid molecule comprises ~~is~~ a DNA plasmid expression vector.

1 39(currently amended). The method of claim 33 wherein the
2 pharmaceutical agent **comprises** ~~is~~ a protein.

1 40(currently amended). The method of claim 33 wherein the
2 pharmaceutical agent **comprises** ~~is~~ an organic molecule.

Insert the following new claims:

1 41(new). The method of claim 15, wherein the host tissue
2 comprises skeletal muscle.

1 42(new). The method of claim 25, wherein the host tissue
2 comprises skeletal muscle.

1 43(new). The method of claim 33, wherein the host tissue
2 comprises skeletal muscle.